

# university of alberta

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|----------------------------------|----------------|
| Campus Planning<br>& Development |                |
| Member's File <u>1800</u>        |                |
| Doc. No. <u>1816-3</u>           |                |
| Re: <u>LONG RANGE</u>            |                |
| <u>LANDSCAPE DEVELOPMENT</u>     |                |
| <u>PLAN STAGE ONE</u>            |                |
| Committee                        | Dist. Date     |
| CDC                              | <u>16/2/71</u> |
| UPC                              | <u>16/2/71</u> |
| BBC                              |                |
|                                  |                |

long range  
landscape development plan  
stage one: analysis

Hough, Stansbury + Associates Limited

Land Resource Planning  
Environmental Research  
Site Planning + Design

FEBRUARY 1971









# Hough, Stansbury + Associates Limited

Land Resource Planning  
Environmental Research  
Site Planning + Design

51 Colborne St., Toronto 1, Ontario (416)-366-9497  
10920-88 Ave., Edmonton, Alberta (403)-439-0665

February 9, 1971

Dr. W. D. Neal,  
Vice President,  
Planning and Development,  
The University of Alberta,  
Edmonton, Alberta.

Dear Dr. Neal:

We are pleased to submit the first stage draft report of our Long Range Landscape Development Plan, in accordance with Walter Hiller's instructions to us of November 19, 1970.

We should like to express our appreciation to you and members of the Campus Development Office for the tremendous cooperation we have received during the preparation of this first report.

The great assistance of the staff of Folio in putting out the questionnaire, and the enthusiastic response of Faculty and Students of the University in responding to our questions, has made our work a rewarding experience.

We look forward to a continued and productive relationship with you and your committee in our efforts to provide imaginative and practical solutions to the issues outlined in this report.

Yours sincerely,

MH/sw

Michael Hough  
Principal-in-charge

Michael Hough,  
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James Stansbury,  
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Associate, Engineering Coordinator



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## INTRODUCTION

This report is the first stage of an overall Long Range Landscape Development Plan whose objective will be to set down the comprehensive principles, guidelines and recommendations for landscape development for the University of Alberta Campus. It forms an extension to the Long Range Development Plan by Diamond & Myers, and its intent will be to reinforce and amplify the goals and objectives of that plan in terms of open space.

This phase is primarily concerned with fact finding and analysis of factors relating to the outdoor campus. It evaluates vehicular traffic, service and parking, pedestrian movement, open space, and landscape management to determine how the University functions at the present time, what will be the implications of future development on outdoor functions, and what are the areas of concern that must be resolved in the long range plan. The consultants have undertaken a survey of the needs and requirements of the University community to determine a basic program, and establish principles and recommendations that will form a basis for the evolution of the landscape plan. These principles and recommendations are included at the beginning of this report and at the end of each section under review.

The sources of information drawn on in the preparation of the report include the Diamond & Myers Long Range Development Plan, City of Edmonton Parks & Recreation Department, reports of other consultants, the Campus Development Office, Folio, members of the University Faculty, and students. In addition, extensive on site study and analysis has been carried out from the beginning of December 1970 to the present time.





## SUMMARY OF PRINCIPLES & RECOMMENDATIONS

General considerations of landscape planning should form an integral part of all future decisions with regard to all stages and aspects of the University Development Program.

### VEHICULAR TRAFFIC

All traffic proposals for the campus should be integrated with other campus uses, particularly as they relate to landscape criteria, with a view to ensuring that the total interests of the University are met.

### SERVICE, PARKING & UTILITIES

1. Vehicular service routes should be coordinated with exterior pedestrian movement patterns.
2. Vehicular service access should, where possible, be on a cul-de-sac system, rather than a loop system, and assuming satisfactory turning space at access points to buildings.
3. Service to buildings should, where possible, be grouped around service courts. Short term parking for a limited number of cars should be associated with service at major buildings.
4. Where service roads and pedestrian routes coincide, the area should be considered, and designed, as pedestrian space, but allowing vehicular access and movement. Where necessary, emergency vehicles should be routed along pedestrian routes designed to take them. Requirements for fire trucks with regard to routes, access to buildings, should be determined as the various parts of the University are implemented.

### PEDESTRIAN CIRCULATION

1. A rational pedestrian system should complement the interior system by providing alternative routes and short-cuts from one place to another.





2. Major routes should have a strong character and identity as obvious connectors between important places. Other routes become short-cuts between buildings and places, and create a diversity of minor linkages, with a variety of characters.
3. Major routes should connect all major centres of activity within the campus. These nodes become orientation points, and are the logical places where connections may be made into the internal street system.
4. Major crossings with streets should be concentrated at key points and resolved either at grade, or by vertical separation.
5. Major routes should respond to desire lines as far as possible, unobstructed by barriers to movement.
6. Where possible, steps should be avoided on major routes; changes of grade should be accomplished by ramps to accommodate bicycles and paraplegics.
7. Routes subject to peak flows at specific times should be wide enough to accommodate this traffic.
8. Connections through the 112th Street student residence should be studied in relation to future pedestrian movement.
9. Consideration should be given to negotiating an easement through the St. Stephens College property to accommodate the heavy pedestrian movement.

## OPEN SPACES

1. The requirements of open spaces in terms of their function, usability, and visual quality should be incorporated into all future considerations of the development program.
2. The restructuring of major spaces that will not be disturbed or spaces that will be established under the present building program, should be undertaken in conjunction with the planning and design of buildings and implemented as funds become available.
3. The open space system should reflect the intent of the Long Range Development Plan, in terms of diversity of function and character, having major places for gathering, quiet places for reading and study, places for recreation, etc.





4. The open space system should be continuous and inter-linked, allowing movement from one place to another independent of buildings.
5. The use of roof-tops and interior landscape already recommended in the Long Range Development Plan should be considered at every stage of the building program.
6. A planting program should be implemented in conjunction with open space planning that will make resourceful use of material adapted to the Edmonton area, to satisfy the functional, climatic, and visual requirements of the campus.
7. Negotiation with non-university land owners adjacent to or within the campus, would be desirable to allow a rational and harmonious integration of the campus open spaces.
8. Care should be taken in the future development of the long range development plan to preserve and enhance those areas of the campus that have beauty and character.

## CLIMATE

1. Design for climate, to provide wind-free environments, and maximum sun, through the organization and arrangement of various elements, including plants, should be a primary consideration. In addition, the use of the campus during the summer should be a major planning consideration.
2. The Long Range Development concept for including tropical planting in interior galleries and spaces should be studied to establish design and maintenance parameters.

## RIVER BANK

1. Study of the river valley carried out in conjunction with the city should consider the education and social needs of the University and the community, so that these may be achieved and integrated with river bank stabilization.
2. The wooded slopes of the valley should be continued beyond the crest to provide a visual and physical connection between the University and the river.





## GROUPS FURNISHINGS & LIGHTING

Grounds furnishings and lighting are an integral part of the visual and functional environment of the campus, and should be developed in conjunction with the Long Range Landscape Plan.

## LANDSCAPE MANAGEMENT

1. Landscape Management is critical to the success of a landscape plan. Policies, and a philosophical base for maintenance operations and budgeting are a part of the plan and should be worked out with the University during the period of its preparation.
2. An inventory of historic or important site features, and of existing plant materials should be undertaken as a prerequisite to establishing management goals.
3. A study should be made of non-horticultural maintenance including garbage collection, security, radiation control, fire protection in relation to the long range development plan and the landscape plan.
4. Investment in landscape development and horticultural programs should be geared to providing the maximum value for money spent.
5. Establishment and adherence to sound planning and horticultural policies are essential if existing trees on campus are to be preserved and remain in a healthy state.
6. For the Plant Nursery to become fully effective, a planting program to determine long term needs should be worked out during the preparation of the Landscape Plan, and integrated with a long range planting and propagation program for the nursery.





## LONG RANGE DEVELOPMENT PLAN

The Long Range Development Plan for the University of Alberta, prepared by Diamond & Myers, Architects & Planners, sets out the broad guidelines for the future growth of the campus up to an estimated 30,000 students by 1975-76. It is on the basis of the goals and objectives, and principles, set out in this plan that the Long Range Landscape Plan will be developed. The relevant areas of concern for open space planning are, therefore, summarized below:

### TRAFFIC

#### 1. Pedestrian

- concentration of departments performing high service functions near the centre of the campus.
- internal pedestrian movement system throughout the campus through climate controlled linkages within buildings.
- provision of alternative means of pedestrian access to buildings by outdoor pedestrian easements.
- separation of pedestrian and vehicular traffic vertically or horizontally, at all major crossing points.
- design and location of pedestrian walks so that they can be used by emergency vehicles.

#### 2. Public Transit

- encourage use of public transport by recommending that transit stops be located close to student population centres.
- public transit system as direct feeder to the campus.
- use of separate bus lanes on campus.
- upgrading of streets to allow improved traffic flows.

#### 3. Private Automobile

- elimination of all through traffic on campus.
- distribution of parking structures on the periphery of the campus.
- physical and visual unification of the campus by uniting the Lister Housing Complex, Health Sciences Centre, and the river bank.





#### 4. Internal University Circulation

- effect interface between automobiles and pedestrians along major streets, while retaining physical separation.
- provision of automobile drop-off points close to population centres.
- location of service roads to be visually and physically unobtrusive.

#### ATHLETICS & RECREATION

- encouragement of spectator interest and participation in intra-mural sports, with easy accessibility of facilities from areas of student concentration.
- distribution of minor facilities about the campus, and related to major movement systems.
- to encourage a mix of resident and non resident students.

#### HOUSING

- location of housing on campus for as many as possible.

#### COMMUNITY LINKAGES

- visual unification of University and surrounding community.
- location of public oriented University facilities to enable easy access by the public.

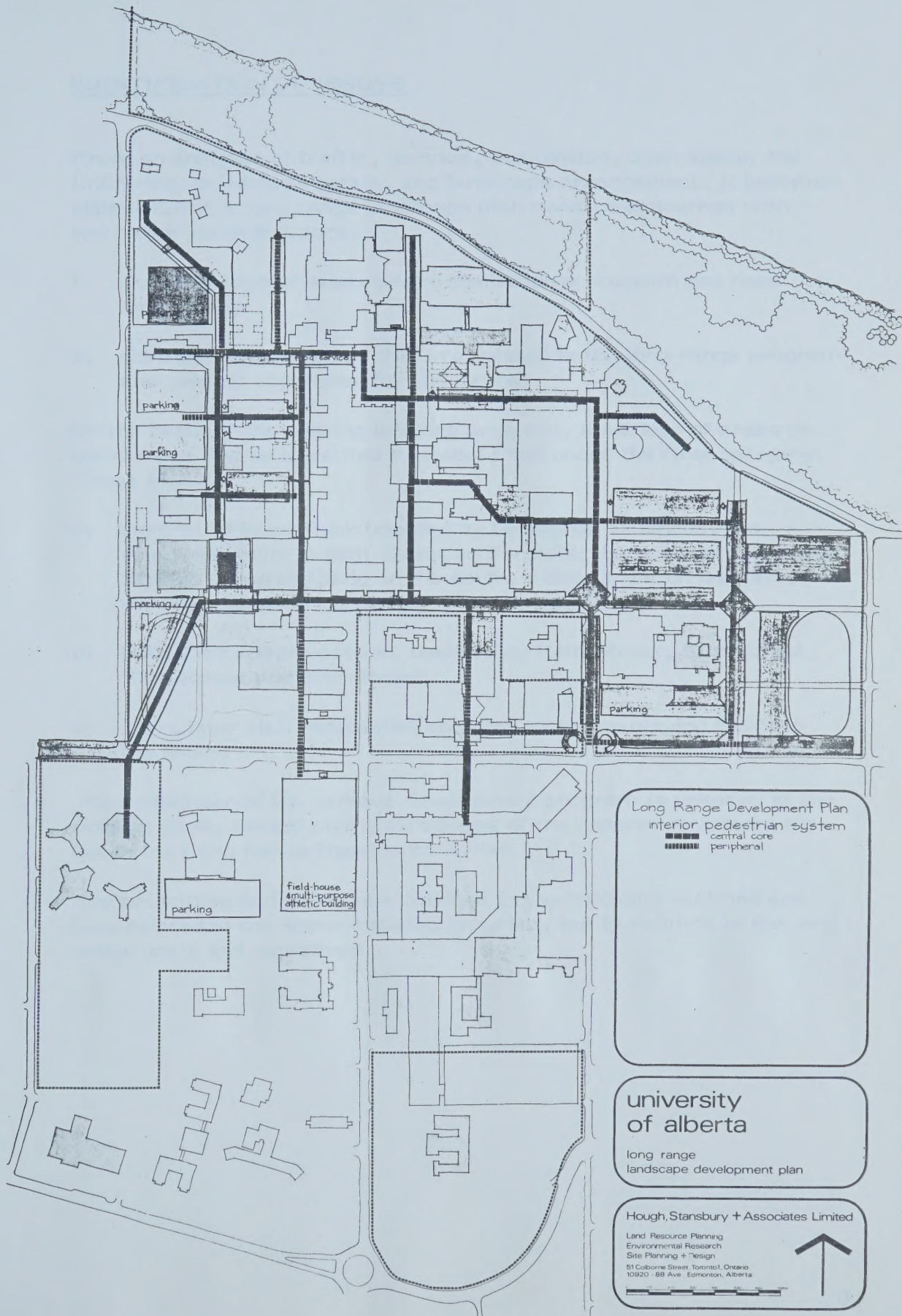
#### FOOD SERVICES

- incorporation of minor food services along major circulation routes.
- location of food facilities for easy access from major pedestrian nodes and population centres.

#### OPEN SPACE

- increase of land coverage from 15% to 34%, partly by multi-level parking structures, partly by infilling of new buildings within the campus area.
- structuring of open spaces within the campus to become appropriately useable, and visually enhanced.
- direct accessibility to the less structured open space of the river bank as a contrast to the structured open spaces adjacent to building complexes.





Long Range Development Plan  
interior pedestrian system

■■■■■ central core  
----- peripheral

university  
of alberta

long range  
landscape development plan

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## IDENTIFICATION OF ISSUES

From an analysis of traffic, service, circulation, open space, the University building program, and landscape arrangement, it becomes apparent that a long range landscape plan must be concerned with two major considerations:

1. Consideration of areas where the building program has been determined.
2. Consideration of areas that are related to the long range program and general objectives for the future.

On the basis of the ongoing building program, a number of areas on the campus can be identified that would fall under the first category. These include:

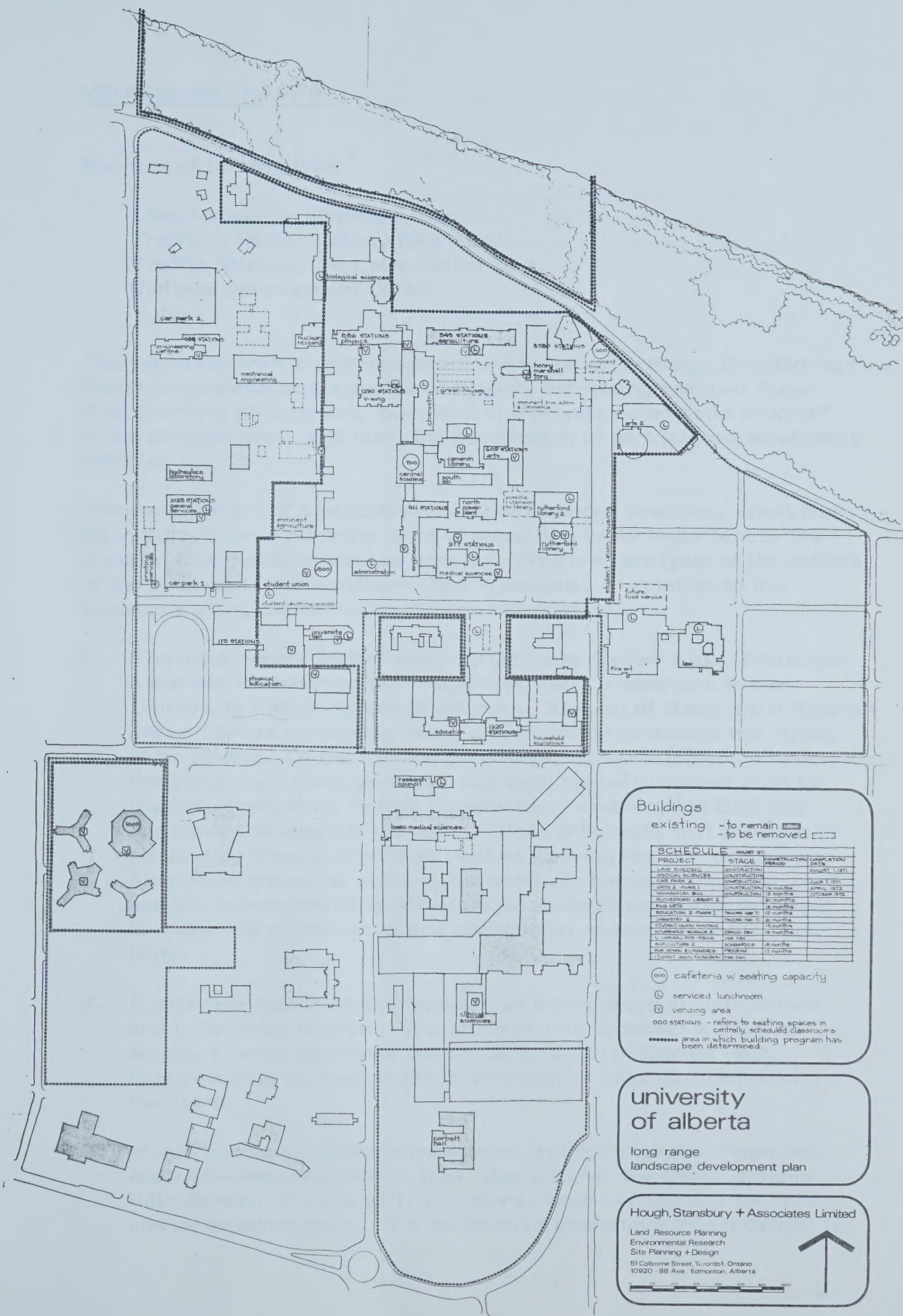
- a) Central campus block bounded by Biological Sciences, old residence halls to 89th Street on the west; 89th Street, including Student Union Building on the south; 112th Street on the east; the river bank on the north.
- b) Education complex block, bounded by 114th Street, 87th Street, 112th Street and 89th Street.
- c) The Lister Hall residential complex including playing fields to the south.

The remainder of the campus development program is unknown at the present time, except within the context of the general objectives set out in the Long Range Development Plan.

The principles and objectives outlined in the following sections are thus related to the known building program, but in relation to the long range goals and objectives.







## Buildings

existing - to remain  
- to be removed

| PROJECT                | STAGE        | CONSTRUCTION PERIOD | COMPLETION DATE |
|------------------------|--------------|---------------------|-----------------|
| LAW BUILDING           | CONSTRUCTION |                     | 1981            |
| MEDICAL SCIENCES       | CONSTRUCTION |                     | 1981            |
| CAR PARK 2             | CONSTRUCTION | 12 months           | 1981            |
| UNITS 2, PHASE 1       | CONSTRUCTION | 12 months           | 1981            |
| MEDICAL SCIENCES BLDG. | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION LIBRARY 2    | CONSTRUCTION | 20 months           | 1981            |
| PHYS. BLDG.            | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 1   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 2   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 3   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 4   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 5   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 6   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 7   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 8   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 9   | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 10  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 11  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 12  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 13  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 14  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 15  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 16  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 17  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 18  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 19  | CONSTRUCTION | 12 months           | 1981            |
| EDUCATION 2, PHASE 20  | CONSTRUCTION | 12 months           | 1981            |

000 cafeteria w/ seating capacity

① serviced lunchroom

② vending area

000 STATIONS - refers to seating spaces in centrally scheduled classrooms

\*\*\*\*\* area in which building program has been determined

university  
of alberta

long range  
landscape development plan

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Scale: 1" = 100'







## VEHICULAR TRAFFIC

### Sources of Information:

Long Range Development Plan  
Traffic & Parking Study 1968 AESL  
Traffic Studies, De Leuw Cather Ltd.  
Campus Development Office

The vehicular traffic patterns proposed in the Long Range Development Plan are conceived as a series of filters, extracting heaviest flows first (parking structures); bus, taxi and private automobile drop-off in the campus next; and last, the penetration of service and emergency vehicles.

The development of a pedestrian oriented campus precinct, apart from its validity from a planning point of view, is vitally important to the creation of a viable landscape concept. From an analysis of the effects of the proposed traffic patterns on the campus, in relation to the landscape plan, the following factors are apparent:

1. The most recent traffic study by De Leuw Cather Ltd., proposes a number of schemes with regard to traffic movement in the University Health Sciences vicinity. Several of these show Saskatchewan Drive remaining open, while another proposes the street to be closed. Of the former proposals, Scheme II, which maintains the street as a through route, has been verbally agreed upon by the University-City liaison Committee, however, the City has agreed not to upgrade the road. Since this route will continue to be used by through traffic as well as serving the University, consideration should be given to the conflicts between vehicular traffic and the increasing concentrations of students crossing the street to make use of the social and educational resources of the river bank.
2. A separate traffic study proposes an interchange at 114th Street and University Avenue. The effect of this proposal will be to occupy a large section of the property south of Corbet Hall, thus reducing its usefulness to serve other essential University functions.

In addition, considerable pedestrian traffic originates from the south Garneau residential area, destined for the Campus along 114th Street. People will, therefore, have to negotiate the interchange at some point. If a decision to implement this proposal is





made, consideration of pedestrian traffic and the University's use of Corbett Hall land must be integrated with solutions to traffic problems.

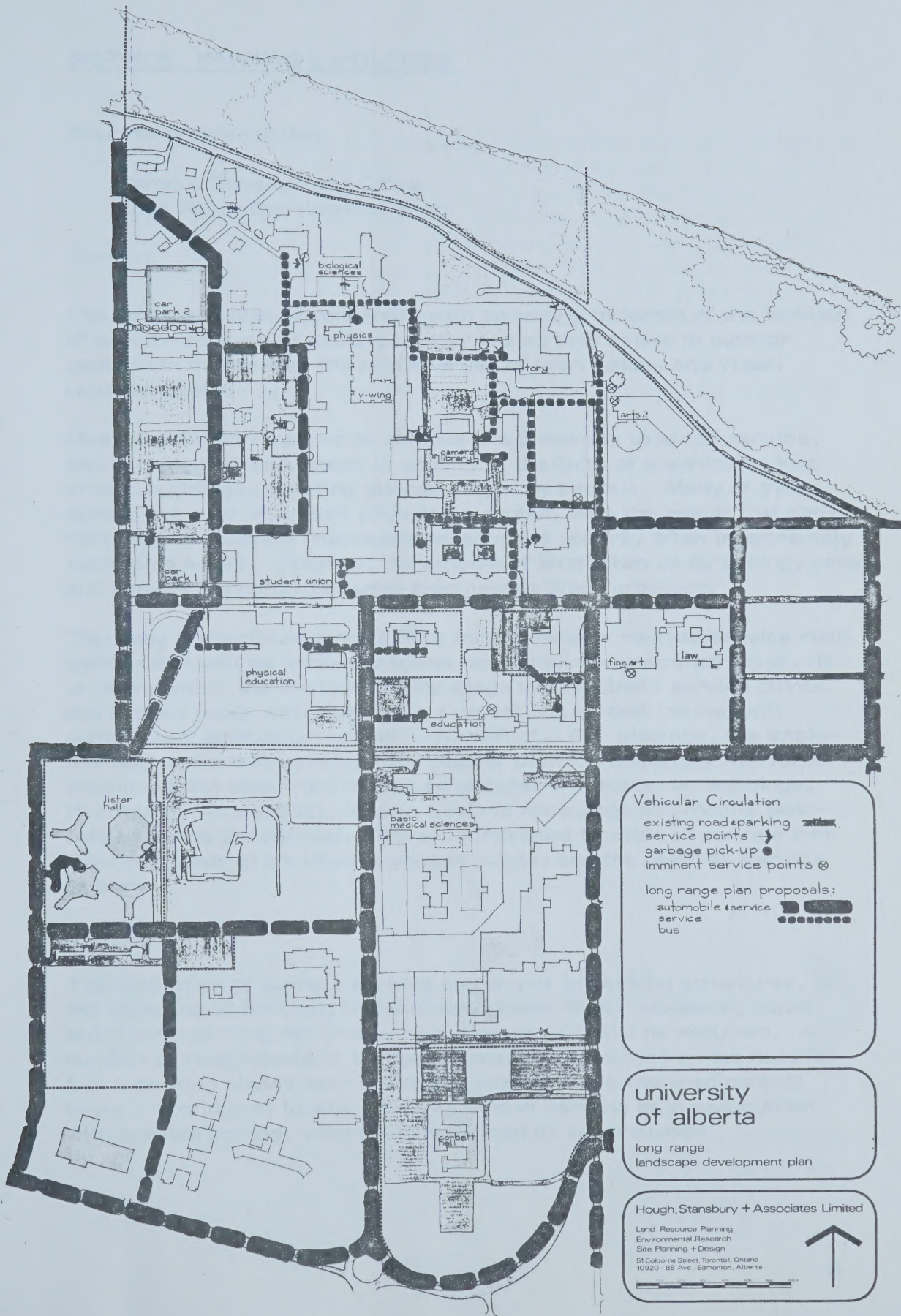
3. It is understood that verbal agreement has been reached to maintain 87th Avenue as a through street. On this basis the importance of rational pedestrian connections across it at key points cannot be overemphasized.
4. The proposed widening of 116th Street will decrease the capability of the existing pedestrian route adjacent to the football field from Lister Hall. Consideration of pedestrian flows in this area should, therefore, be integrated with the proposed widening.
5. The 116th Street Emily Murphy interchange study, undertaken since the Diamond & Myers Plan, shows two alternative proposals for connecting 115th Street with 116th Street. One of these connects 115th Street directly into Saskatchewan Drive east of the President's Residence. This proposal, if implemented, will have an unfortunate impact on the land between the Faculty Club and existing houses; a) The area is one of the most pleasant places on campus, b) The land will be cut up into several unuseable parcels, c) It is presently and will continue to be, an important pedestrian precinct which should remain vehicular free.
6. Some consideration should be given to the possible future need for a parking garage location in the existing surface lot east of Biological Sciences. Should this occur, the satisfactory resolution of pedestrian movement, open space and related factors will be necessary.

The principles and recommendations related to traffic may be summarized as follows:

All traffic proposals for the campus should be integrated with other campus uses, particularly as they relate to landscape criteria, with a view to ensuring that the total interests of the University are met.



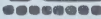
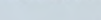
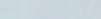




#### Vehicular Circulation

existing road & parking   
 service points →  
 garbage pick-up ●  
 imminent service points ⊗

long range plan proposals:

automobile service   
 service   
 bus 

#### university of alberta

long range  
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## SERVICE, PARKING & UTILITIES

### Sources of Information

Campus Development Office  
Long Range Development Plan

### Service

The landscape plan is concerned with servicing in terms of the location of service routes and loading points, and as they relate to outdoor pedestrian movement, the effective use of open space, and visual considerations.

Most of the minor spaces on campus are presently used for service, and parking access to them is usually in the form of a vehicular loop around buildings, creating islands ringed by asphalt. Many of these spaces are also important pedestrian routes, with the result that conflict between service trucks and pedestrians occurs, often in extremely restricted areas. Visually, the amount of land taken up by paving, cars, and service vehicles, presents a somewhat bleak prospect.

The Long Range Development Plan incorporates a revised service road system that will be implemented as new buildings are constructed. It is important at the implementation stage to coordinate service points and access roads with pedestrian circulation, so that the two will complement each other rather than conflict. For instance, the implementation of a loop service road west of the old residences will force people moving east from the future garages and academic buildings, to cross it. In addition, looping tends to encourage automobile penetration inside the campus. The uncoordinated location of service into buildings tends to proliferate access points, and the need for service to them.

### Parking

The relocation of surface parking on campus to parking structures, is the objective of the Long Range Development Plan. However, some short term parking for faculty and visitors will still be required. A number of respondents to the questionnaire commented on the need for 5 to 6 parking places near buildings, possibly on a metered control basis. The logical location for this kind of parking is in association with service access, where all traffic can be co-ordinated.



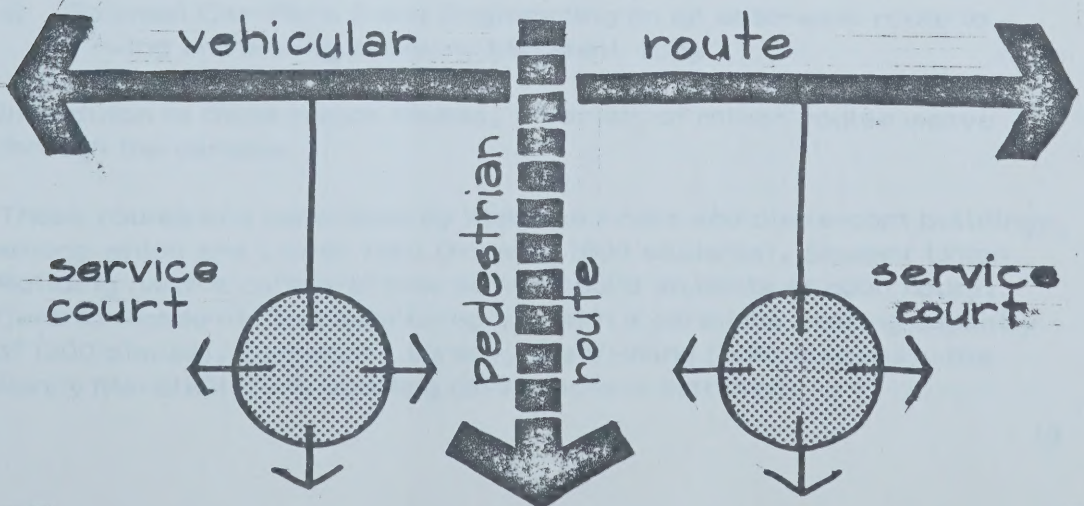


## Utilities

The location of utilities will, in general, not affect surface development due to their depth below grade. Since the present utility tunnel system for the main campus is scheduled for completion in September of 1971, it will be necessary to consider temporary surface improvements in construction areas prior to permanent development being undertaken. Since no decisions have yet been made with regard to utility location in the North Garneau area the possibility exists to integrate these services with building and site development at the appropriate time.

The principles that are recommended for service and parking may be summarized as follows:

1. Vehicular service routes should be coordinated with exterior pedestrian movement patterns.
2. Vehicular service access should, where possible, be on a cul-de-sac system, rather than a loop system, and assuming satisfactory turning space at access points to buildings.
3. Service to buildings should, where possible, be grouped around service courts. Short term parking for a limited number of cars should be associated with service at major buildings.
4. Where service roads and pedestrian routes coincide, the area should be considered, and designed, as pedestrian space, but allowing vehicular access and movement. Where necessary, emergency vehicles should be routed along pedestrian routes designed to take them. Requirements for fire trucks with regard to routes, access to buildings, should be determined as the various parts of the University are implemented.







## PEDESTRIAN CIRCULATION

### Sources of Information:

- Building project reports
- On-Site analysis
- Questionnaire
- Diamond & Myers Development Plan

### Meetings with:

- Campus Development Office
- Mr. Jack Raven – Food & Housing Services
- Mr. John Williamson – Institutional Planning & Research

Pedestrian movement patterns respond to a number of major desire lines at the present time:

- a) Between Lister Hall complex on a diagonal across the campus to the Student Union Building, Central Academic Building, and ending at the Henry Marshall Tory classroom complex.
- b) From Health Sciences complex on a north-south route to the Student Union Building, west side of the central quad, and ending at Biological Sciences and The Faculty Club.
- c) Between the South Garneau residential area, on a north-south route up 112th Street to Rutherford Library, and ending at Henry Marshall Tory.
- d) Between the Car Park 1 and Law & Fine Arts on an east-west route along 89th Avenue.
- e) Between Car Park 2 and Engineering on an east-west route to V-wing and ending at Henry Marshall Tory.

In addition to these major routes, a variety of minor routes weave through the campus.

These routes are generated by high use areas and classroom buildings, among which are Lister Hall (housing 1800 students), Student Union Building (with a cafeteria now serving 6000 students at noon hour), Central Academic Building complex (with a cafeteria seating capacity of 1300 places), Cameron Library, the V-Wing (1290 stations), the Henry Marshall Tory building (3780 lecture stations).



Considerable conflicts presently occur in a number of situations:

- a) Major crossing points on 87th Avenue at 116th Street and 112th Street.
- b) Diversions created by the fenced athletic field, forcing students around the area.
- c) Movement across parking lots and through service areas (e.g. St. Stephens College parking lot; service area between Cameron Library and green-houses.)
- d) Movement through buildings in the absence of clearly defined alternative routes (e.g. movement through V-wing for east-west traffic).
- e) Movement impeded by poor connections (e.g. the steps at the Central Academic Building) impedes the strongest pedestrian flow in the campus from the Student Union Building to Henry Marshall Tory. In addition to being poorly designed and a danger to pedestrians, they form a very poor connection at a major pedestrian confluence.
- f) Maximum movement occurs at specific times between classes. At these times it becomes evident that most paths are quite inadequate in width to take flows, and most people walk on the street (e.g. Arts Building north-south route).

As the Long Range Development Plan becomes a reality, the need to cope with these conflicts will become increasingly urgent. The new Health Sciences Centre will increase pedestrian traffic pressures and conflicts to movement across 87th Avenue on the northern route to the Student Union Building and Biological Sciences. The addition to Education will increase flows north to the Tory Building. Future developments in the North Garneau area and on the west edge of the campus will also increase pressures on an inadequate and inarticulated path system.

Similarly the proposed transit stop at 87th Avenue and 112th Street will concentrate large numbers of students at a busy intersection, and increase densities along major routes at specific times of day.

As existing outdoor routes become diverted or blocked off by new buildings, it will become increasingly difficult to walk from place to place except via the internal pedestrian system. Since it is the basic intent of the Long Range Development Plan to provide a choice between





walking inside or outside, it is evident that a clearly articulated path system, allowing unobstructed access through the campus outdoors must become a fundamental principle in the landscape plan. This principle is born out by discussions with University personnel, and from those who responded to the questionnaire. Many of these commented on the difficulty of moving from one place to another, not only on foot, but by bicycle.

Bicycles above all require continuous uninterrupted paths, free of steps and other hinderances. A number of people during the warmer months of the year, arrive on campus by bicycle, and as the campus develops into a traffic-free pedestrian precinct, the need to move about campus on routes designed for the purpose will become an increasingly important aspect of the circulation system. Similarly, bicycle parking will have to be related to centres of student concentration.

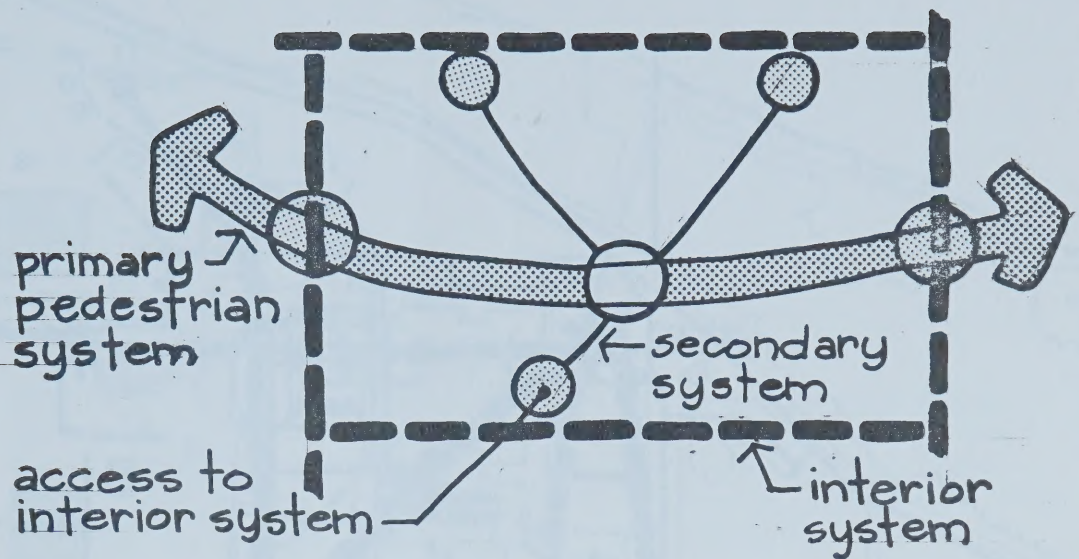
The question of identity on the campus, that is, the ability to find one's way around with a clear sense of direction, is another problem that has been expressed many times. As infilling of the campus proceeds, and the familiar vistas of low density urban form disappear in favour of a more tight urban environment, this sense of identity will increasingly depend on a clearly articulated system of pedestrian routes, open spaces, and activity centres.

Thus, the basic principles for pedestrian movement on campus may be summarized as follows:

1. A rational pedestrian system should complement the interior system by providing alternative routes and short-cuts from one place to another.
2. Major routes should have a strong character and identify as obvious connectors between important places. Other routes become short-cuts between buildings and places, and create a diversity of minor linkages, with a variety of characters.
3. Major routes should connect all major centres of activity within the campus. These nodes become orientation points, and are the logical places where connections may be made into the internal street system.



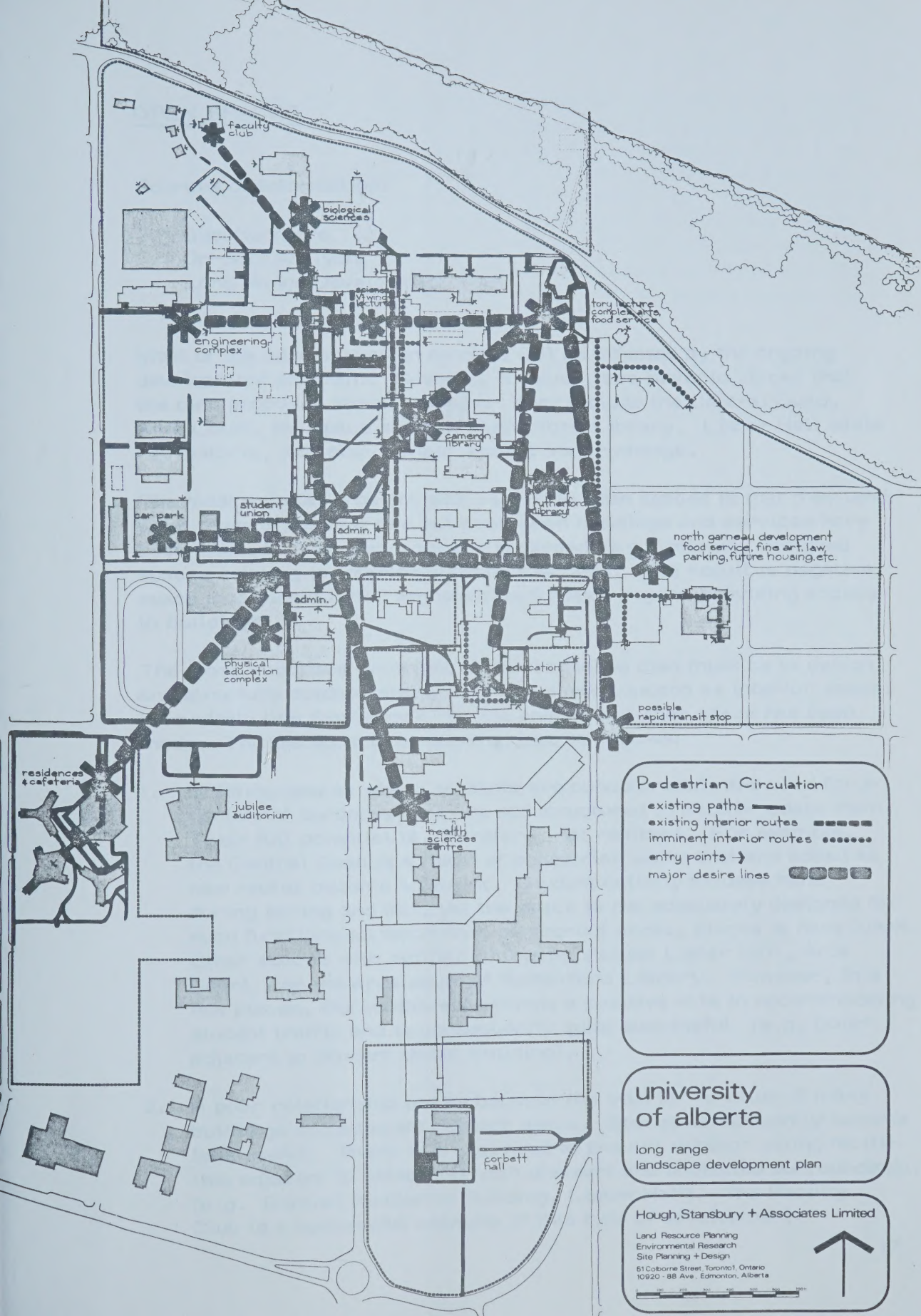




4. Major crossings with streets should be concentrated at key points and resolved either at grade, or by vertical separation.
5. Major routes should respond to desire lines as far as possible, unobstructed by barriers to movement.
6. Where possible, steps should be avoided on major routes; changes of grade should be accomplished by ramps to accommodate bicycles and paraplegics.
7. Routes subject to peak flows at specific times should be wide enough to accommodate this traffic.
8. Connections through the 112th Street student residence should be studied in relation to future pedestrian movement.
9. Consideration should be given to negotiating an easement through the St. Stephens College property to accommodate the heavy pedestrian movement.







### Pedestrian Circulation

- existing paths —
- existing interior routes - - - - -
- imminent interior routes . . . . .
- entry points →
- major desire lines - - - - -

## university of alberta

long range  
landscape development plan

Hough, Stansbury + Associates Limited

Land Resource Planning  
Environmental Research  
Site Planning + Design  
61 Colborne Street, Toronto 1, Ontario  
10920 - 88 Ave., Edmonton, Alberta







## OPEN SPACES

### Sources of Information:

- Questionnaire
- On-Site Analysis
- Long Range Development Plan

Most of the open spaces on campus will be affected by the ongoing development program. Several, however, are historic places that the plan proposes should remain. They include the Central Quad, Arts Court, the space south of Rutherford Library. Lister Hall while not historic, will also remain without major change.

The most critical problem with regard to open spaces is that they tend to be those areas that are left over when buildings and services have been located. Very few could be regarded as consciously designed spaces relating to interior building functions. The result is negative space that cannot fulfill any positive function beyond providing access to buildings.

The most important principle of the landscape plan must be to design and structure outdoor spaces with the same concern as interior space. It is within this framework that the analysis of open space has been made. The issues may be summarized as follows:

1. Existing spaces where students are concentrated, are used for a variety of purposes, but are not structured to accommodate them. Their full potential is, therefore, not realized. For example, the Central Quad is a maze of pedestrian walks that are added as new routes become apparent. Student activity focuses here during spring and fall, yet the space is not adequately designed for such functions as teach-ins, sitting-out areas, places to have lunch. Other spaces with similar problems include Lister Hall, Arts Court, and the area south of Rutherford Library. However, in a few places, the outdoors performs a positive role in accommodating student traffic and is consequently quite successful (e.g. Court adjacent to Student Union Building).
2. A poor relationship exists between the interior function of many buildings and adjacent outdoor space. Spaces consequently become less useful. There is a real need to provide outdoor eating facilities adjacent to cafeterias with pleasant and protected surroundings (e.g. Central Academic Building, Lister Hall). The Faculty Club is a successful example of this type of development.





- /
3. Many open areas are created by setbacks adjacent to city streets, and at street corners, and are associated with pedestrian activity and movement along sidewalks with major entrances. The area south of the Faculty of Education on 87th Avenue, and the 87th Avenue 112th Street corner are busy places where students and the public mingle, and where there is potential for creating useful outdoor meeting places and parkettes, particularly since Education offers summer courses. The future transit stop and associated development in this area will further enhance it as a University city meeting place.
  4. The poor visual quality of much of the campus reflects a lack of consideration for spatial character during the summer when students are outside, and particularly during the winter when the outdoors tends to be seen but not used. For example:
    - a) Many spaces are devoid of plants, creating a bleakness similar to that of an empty room.
    - b) Where trees exist, they usually do little to create enclosure, visual screening and relief from building walls. Where this does occur, the visual impact is considerable; for instance, the small treed spaces between the old residences, and the enclosed lawn of the former President's residence. There is a need for continuity and organization of planting concept within the campus, to give spaces definition and varied character according to their function, and to use plants functionally for wind screening and shade, as well as visually and decoratively.
    - c) Many areas lack enclosure which inhibits active use and enjoyment. A number of these are not connected to buildings and are simply negative left over places. (e.g. North Courtyard Biological Sciences; the space around "Tory Turtle".
    - d) The visual scale of buildings is very often overpowering particularly in small spaces, and where pedestrian movement occurs near buildings. (e.g. Chemistry Building Court; west and south sides of Biological Sciences).
    - e) While views out from buildings are important, views in from the outside are equally important, since much of the vitality of the campus is expressed by the activities going on inside. This quality is negated if new buildings are designed with tinted or reflecting glass, as is the case in the new Central Academic Building connection.





f) Non-University spaces over which there is no direct control, but which have an influence on the campus, occur in a number of places. (e.g. St. Joseph's and St. Stephens Colleges). It would be desirable to negotiate some arrangement in terms of the visual and functional use of these open spaces which would be of benefit to both the University and other land users.

The ongoing implementation of the Long Range Development Plan will have the effect of creating more enclosure and a more urban environment. The potential for reinforcing the Diamond/Myers concept exists through the development of an open space system that contributes to its functional and visual objectives. Thus, the following factors should be considered:

1. The addition of new buildings will enclose and create new spaces. The planning of these spaces will require consideration at the same time as buildings are designed. Specific examples will illustrate the point:
  - a) The Arts Court will be enclosed when the 112th Street housing is realized. The planning of the space should respond to the activities and needs of the occupants, in particular the requirement of a recreational and casual sports area (see Section on Program, Athletics and Recreation). This requirement will relate to other future residential units.
  - b) The space created by the demolition of the greenhouses will require study with regard to its short term and long term objectives.
  - c) New food services will require adjacent open space, and must allow continuous interconnections of open space to occur at the same time. (e.g. The food service proposed in the vicinity of Assiniboia residence and the V-wing).
2. New development will create major activity centres that will require careful structuring. For example, the expansion south of Student Union Building will create a confluence of people, a bus drop-off point, and arrival area for cars.
3. Future development in the central campus west of central quad should tie in spaces and circulation with other spaces on campus, without the loss of some of the pleasant places that presently exist. The only significant grade change occurs here and should be used to advantage to separate outdoor and indoor circulation.





The principles and long range objectives that are recommended for Open Spaces may be summarized as follows:

1. The requirements of open spaces in terms of their function, use-ability, and visual quality should be incorporated into all future considerations of the development program.
2. The restructuring of major spaces that will not be disturbed or spaces that will be established under the present building program, should be undertaken in conjunction with the planning and design of buildings and implemented as funds become available.
3. The open space system should reflect the intent of the Long Range Development Plan, in terms of diversity of function and character, having major places for gathering, quiet places for reading and study, places for recreation, etc.
4. The open space system would be continuous and inter-linked, allowing movement from one place to another independent of buildings.
5. The use of roof-tops and interior landscape already recommended in the Long Range Development Plan should be considered at every stage of the building program.
6. A planting program should be implemented in conjunction with open space planning that will make resourceful use of material adapted to the Edmonton area, to satisfy the functional, climatic, and visual requirements of the campus.
7. Negotiation with non-university land owners adjacent to or within the campus, would be desirable to allow a rational and harmonious integration of the campus open spaces.
8. Care should be taken in the future development of the long range development plan to preserve and enhance those areas of the campus that have beauty and character.





The following short term objectives are recommended:

1. Existing parking areas are likely to remain for some time to come, and should be studied with a view to providing a more pleasant environment, adequate circulation where necessary, both by vehicle and on foot, and screening.
2. The greatest complaint of respondents to the questionnaire was the continued construction situation. Certain steps of a temporary nature could be taken to alleviate this problem.
  - a) Provision of a more direct circulation system incorporating boardwalks of sufficient width where necessary.
  - b) The improvement of temporary hoarding design, without involving large additional costs. For instance, graphics, colour, places for posters would add gaiety to a necessary inconvenience.
  - c) The haphazard dumping of equipment, materials, and cars over construction sites and beyond should be controlled to prevent damage to existing trees and minimize visual deterioration of the campus.
3. The fixing up of temporary spaces should be explored, not always with grass and trees, but, depending on the situation, with bright paint, supergraphics on walls and asphalt surfaces, simple water outlets to create ice formations in winter, temporary sculpture in association with the Fine Arts Department, flooding of some areas for ice skating and other simple means of achieving the maximum results for minimum costs.











## CLIMATE

### Sources of Information:

1969 Annual Meteorological Summary  
Prof. R. Langley, Department of Geography  
Dr. D.P. Hube, Department of Physics

An examination of climatological data has revealed the severity of the long winter season, and its coincidence with the majority of the academic year. The Long Range Development Plan in planning for winter use allows for design flexibility since summer use is also an important factor. Should the University introduce a trimester system, this summer use will increase.

The concern of the landscape plan is primarily related to the micro-environments that exist or are generated by new building.

The two most critical factors with regard to winter climate are wind and sun. A wind on a very cold day in Edmonton creates extremely unpleasant conditions, particularly in the absence of sun. Conversely the absence of wind and the presence of sunshine can make being outdoors a very pleasant experience, even when the temperature is below zero. The most important aspect of any landscape development, therefore, is to provide sunny, wind free spaces.

The issues concerning climate on the campus may be summarized as follows:

1. Prevailing winds are generally from the south, with associated winds from the north-west which are the coldest and strongest. These winds primarily affect the periphery of the campus, particularly in large open areas such as the playing fields. Inside the campus winds are diverted by buildings with the result that no constant wind pattern can be said to exist. As the campus grows, wind deflection and venturis will become more complex and a greater problem, unless climate control at a landscape level is incorporated.
2. The problem of venturis and persistent winds on the campus creates unpleasant walking conditions outside in winter. Where these cannot be avoided, the arrangement of spaces, path orientation, and screening should be related to providing protection. A number of windy situations exist at the present time, particularly around Biological Sciences. Highwinds are generated by tall buildings





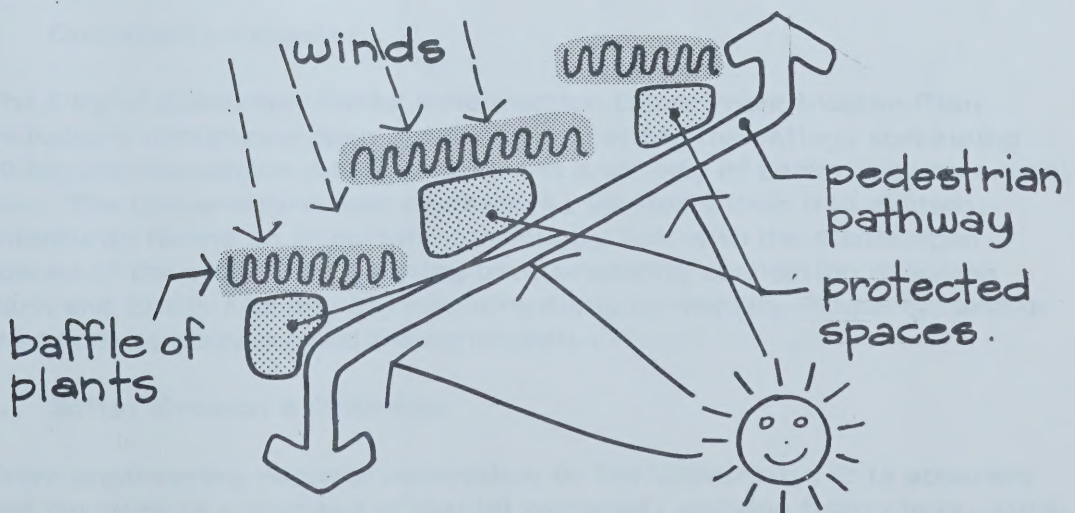
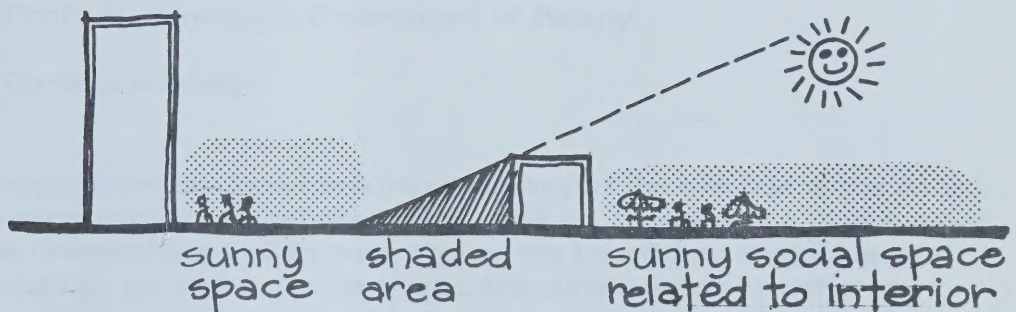
that create downdraft and gusting. An important aspect of the Development Plan is that most future buildings will only be four to six stories high, which will help alleviate wind problems. However, study at a micro-scale will be necessary to ensure that winds generated through building openings do not become a problem (e.g. 112th Street residences).

3. The use of plants to baffle winds needs study, particularly ever-green material. Under present conditions the plants on campus do not satisfactorily perform this function.
4. Sun angles in winter are very low (between  $15^{\circ}$  and  $13^{\circ}$  altitude at noon during December and January). The effect of these altitudes is to create permanent shadow in small spaces enclosed by high buildings located on the south side. Since the greatest need is to maximize sunlight, the future campus should avoid high structures on the south side of spaces, or alternatively locate indoor/outdoor activity areas on the south side of buildings. For instance, the future residential block to be located on 89th Avenue should be as low as possible, while blocks in a north-south orientation may be higher without detriment to sunlight.
5. There is an absence of elements that would take advantage of the winter climate in most open spaces that are seen from within, or walked through. They are consequently of very little visual interest to the passer-by, and present the image of snow-filled vacant spaces awaiting summer use. The Student Union Building entrance court is typical of these. Since they are primarily seen rather than used in winter, planning should be related to this fact. Bright colours on walls, supergraphics, off-beat lighting, water sources designed to freeze as ice sculpture, massed evergreen trees, and places flooded for skating are typical of the kind of elements that would create vitality and pleasure to the campus outdoors.
6. Tropical plants within the interior circulation system of the campus, is admirably appropriate as a method of treating large internal galleries and spaces in cold climates. Needless to say, the stand-ard indoor planting of the kind so often seen in office buildings has little merit. To have impact interior landscape of this nature requires the kind of treatment afforded the display area in the Department of Plant Science greenhouse, expertly and lovingly looked after by Mr. Helge Welling. However, questions of main-tenance, horticultural requirements, temperature and humidity control, lighting and well thought out design principles, need study to establish the feasibility, and cost of such a concept.



The principles and long range objectives which should be considered with regards to Climate, may be summarized as follows:

1. Design for climate, to provide wind-free environments, and maximize sun, through the organization and arrangement of various elements, including plants, should be a primary consideration. In addition, the use of the campus during the summer should be a major planning consideration.
2. The Long Range Development concept for including tropical planting in interior galleries and spaces should be studied to establish design and maintenance parameters.







## RIVER BANK

### Sources of Information:

Parks & Recreation Master Plan 1970-1980, City of Edmonton  
(Preliminary Draft)  
Department of Botany Proposal for Installation of Facilities in  
the University Forest Preserve  
Soil & Foundation Conditions, University River Bank at 112th  
Street, Elmer W. Brooker & Associates Limited  
River Bank Stability Study, Faculty of Engineering

### Meetings with:

Parks & Recreation Department, City of Edmonton  
Dr. G.H. La Roi, Department of Botany  
Prof. Dennis Wighton, Department of Botany  
Prof. Gallop, Department of Botany  
Prof. Thomson, Department of Civil Engineering  
Prof. P. Seymour, Department of Botany

### On-Site Analysis

The river bank forming the north boundary of the campus is the only area approaching natural conditions, and is, therefore, a unique asset to the University and City as a whole. Its benefits to the University community, as well as to the public are considerable at the present time. Given good planning and management these are likely to increase. The following criteria are relevant to this resource:

#### 1. Community Aspects:

The City of Edmonton Parks & Recreation Department Master Plan includes a continuous open space system within the valley, containing hiking and horseback riding trails, and a variety of parks, sports areas, etc. The University-owned south bank, located within this system, potentially forms an important community link with the public open spaces of the city. The existing trail presently connecting Kinsmen Park and Emily Murphy Park occurs along University Property, and is used both by students and the community.

#### 2. Soils, Erosion & Drainage:

From engineering reports undertaken by the University, it is apparent that the bank is composed of glacial material, varying from clays, silts,





sand, and glacial till. Coal seams have been identified in the bedrock about 20 feet above present river level. Study indicates that the University section of the slope (112th Street to 116th Street) is fairly stable against deep seated slides. The toe of the bank in this section is being eroded by the river at about 6" a year, which is precipitating surface slumps. In addition, field checks have indicated slumping at the toe due to ground water movement, with the result that trees have been knocked down, the existing fence torn apart in several places, and the river edge badly damaged. A fairly substantial slump has developed at the top of the bank as a result of surface runoff from Saskatchewan Drive. Runoff from the road has, however, recently been diverted into storm sewers.

Engineering conclusions are that while there is no immediate danger to the bank, erosion over a long period of time will gradually work back towards the crest with consequent damage to the whole bank and the plant communities presently used and protected by Biological Sciences. Erosion has already disrupted the public connection at the river's edge. Protection of the toe by rip rapping is recommended in engineering reports to prevent further slumping.

### 3. Plant Communities:

The river bank is thickly wooded with aspen, birch and spruce on steep slopes, with more open grass and treed areas in the river terrace. University ecologists indicate that there are many rare groups of plants and animals on the slopes which makes the area unique for biological study. Most of the University property has been fenced off to prevent unwanted access, and development of decked walks and scientific equipment is planned for the spring of 1971.

### 4. Cooling Plant:

The University Cooling Plant is located at the 112th Street end of University property at the river's edge. Water is pumped from the river into the cooling plant, circulated through the campus and returned to the plant and recirculated. Water returned to the river is primarily overflow which, at this time of year, has a temperature of 35° to 36°F. In summer this may be as high as 80°F. Thus, the possibility exists for using this water for swimming. The plant is located on the only large flat area of the valley and this could be used in conjunction with swimming facilities, and a water body protected from the body of the river.





## 5. Saskatchewan Drive:

It is recognized that it will be difficult to close this section of the road at the present time. However, an increase in pedestrian traffic will occur as the biological sciences students increase their use of the bank, and as the valley is improved for social uses. Sciences now have 1200 to 1300 students using the facility each term. Thus the need for some controls along the road will become essential to avoid conflicts with vehicles, and potential accidents. In addition, buses take sciences students on field trips every day of the week for the four weeks after fall registration, and adequate bus loading and circulation arrangements will have to be made.

## 6. Uses of the River Bank:

The area has great educational value for sciences, including biology, ecology, geology and engineering. There is great potential for social and recreational uses including, ski trails, biking, swimming, walking and enjoyment of views.

At present there is some understandable reluctance by Biological Sciences to see improvements to the river's edge, for fear of damage to plant communities. There is also reluctance to allow recreational uses of the University-owned bank. Engineering opinion, however, indicates that unless some improvement work is done, these plant communities will, in the long run, be severely damaged by erosion.

The recreational and academic uses of the valley must, therefore, be integrated to resolve conflicts and provide a useable resource for all.

The existing trail south of the fence could be reinstated and integrated with river bank improvements. Consideration should be given to the possible use of groining as well as other methods of bank stabilization to reduce damage to edges and provide areas in conjunction with the cooling plant for swimming. There should be discussions with the city to control undesirable uses of the valley such as trail biking, which are in direct conflict with walking, skiing and social uses.

Consideration should be given to continuing the wooded areas on the slopes into the campus at certain locations to establish visual and physical connections between the University and the river. (see Long Range Development Plan)











## PROGRAM

The recommended program outlined in this section of the report is based on the following:

1. Interviews with University Faculties and Departments, students and service personnel, to determine their teaching, social and operational requirements as they affect open space.
2. Discussions with the Campus Development Office.
3. Questionnaire in the January 14, 1971 issue of Folio to all members of the University Community.
4. Analysis of open space and circulation conducted by the consultants.

### Summary of Results

From discussions held with University personnel, it becomes apparent that the outdoor campus has a considerable influence on the academic, social and functional life of the University, and could have considerably more on the basis of a planned program. For instance, of the 201 questionnaire returns analyzed, 98% indicated, in no uncertain way, that the outdoor environment was important to them. In one way or another most people had suggestions to make as to how the open spaces could become more useful and visually pleasing.\*

From interviews with various Faculties and Departments it became apparent that the campus should be considered as a rich resource for teaching, recreation, and social life at all times of the year. The question of seasonal change and a rigorous winter climate is important since for most of the academic year (November to April), the weather minimizes many social functions, while providing opportunity for others. Many people, however, have expressed the view that the long cold winter makes the use of the campus during warm weather that much more important. In addition, between 4,500 to 5,000 students enrol in summer courses (mostly in the Faculty of Education), when the University can really function as an outdoor campus. If, in the future, the University moves to a trimester system, further emphasis will be placed on outdoor activities of all kinds. A program of uses in a climate that alternates between extreme cold and warm summer days must be extremely diverse and responsive to such contrasts, to meet the demands and opportunities of all seasons.

\* for summary of results see Appendix I



The suggested program may thus be summarized as follows:

## A. ACADEMIC USES

### 1. Sciences

Sources: Meetings with:

Dr. La Roi - Botany  
Prof. Seymour - Botany  
Prof. Gallop - Limnology  
Prof. Knowles - Agriculture  
Prof. Thomson - Civil Engineering

a) Sciences require a water body of modest dimensions for aquatic biology, plant community study, map contouring and teaching activities. The Faculty presently has to travel out of town to find suitable sites, and the distances travelled increase yearly as Edmonton expands. Such a facility on campus could serve a multiple purpose, having an educational value throughout the year, and serving summer social functions and winter skating.

b) The forested slopes of the river bank provide a magnificent resource for the study of plant communities, succession, geological formations, drainage and hydrology. The area is currently used by 1200 to 1300 students each term, and contains rare groups of plants and animals of unique value in an urban campus. Most of the University-owned land is presently fenced off for this purpose, and Bio-Sciences have proposals to develop the area for such studies. In view of the uniqueness of this resource to the University as a whole, however, it is proposed that other recreational and social functions could be incorporated beyond the fenced enclosure, and combined with edge protection improvements (see section on River Bank). Further planting south of the crest of the bank, and within the campus is recommended to create study areas for upland plant and animal communities.

c) Plant material on the campus serves a useful and important teaching function, both for science departments and for the public. The detailed planting program for campus spaces should enhance this potential teaching function.





## 2. Arts, Household Economics, Education

Sources: Meetings with:

Dean Smith

Profs. Forrest, Green, & Marxheimer - Arts

Profs. Yates, Bennett - Fine Arts

Miss T. Dennis & Mrs. P. Jones - Household Economics

Dr. F. Enns - Faculty of Education

Many quiet sunny places are needed for outdoor teaching and study during warm months of the year.

Household Economics have courses involving children, adolescents and families, and require informal gathering areas for small class groups.

Education programs include study of the natural environment and kindergarten teaching has an extension to an outdoor playground.

Drama operates a legitimate theatre at Corbett Hall, which in stage 2 of the Arts Building program, will be moved into the central campus. At that time an outdoor theatre (presently operating in Corbett Hall) will be required for summer programs.

Fine Arts requires informal spaces for outdoor art classes. Facilities are required throughout the campus for band concerts, art displays, sculpture exhibits, etc. These could best be located in the busy parts of the campus where most people gather, and where the greatest interaction between the arts and the campus as a whole may be generated.

## B. ATHLETICS AND RECREATION

Sources: Meetings with:

Dean Van Vliet

Dr. McLaughlin

The Department of Physical Education is under considerable stress to maintain its program with present facilities. The Long Range Development Plan proposes an additional track and field facility, additional tennis courts, and miscellaneous outdoor activities, including squash, badminton, putting greens, etc. While an analysis





of recreational needs is not within the terms of reference of this report, the following facilities reflect the opinions of the Dean of Athletics and the University as a whole, and are important to the effective functioning of the Athletic program, as well as to the long range planning of open space.

1. Maintenance of existing field facilities adjacent to Physical Education Building and Lister Hall.
2. Provision in the future for an additional track and field facility, a field-house, and an additional indoor ice surface.
3. Provision of informal outdoor skating surfaces throughout the campus.
4. Eight or nine small turfed areas for casual sports (touch football, softball, etc.) associated with housing and high use areas of the campus.
5. Additional tennis courts (possibly located on roof-tops associated with residences).
6. A bowling green.
7. Miscellaneous outdoor games associated with minor open spaces including badminton, shuffleboard, golf putting green and driving nets, deck tennis, archery, etc.

#### C. NON-ACADEMIC USES

1. Special University Activities

Sources: Meetings with:

Tim Christian - Student Union  
Trevor Peach - Student Union  
Physical Plant Personnel

Most of the following activities take place in the central campus, and require large spaces structured to accommodate multiple activities.

Varsity Guest Weekend: February - Skating, snow sculpture, in the central quad.



|                    |                                                                                |
|--------------------|--------------------------------------------------------------------------------|
| Barnum:            | End of March – Pancakes sold outdoors, Chuck Wagon races, parades.             |
| Klondike Days:     | July – Barbeque (Non-academic Staff Association) Rock festivals, Fashion show. |
| Frosh Orientation: | September – Outdoor meal, club booths, barbeque, dance, rodeo, teach-in.       |

## 2. Informal Activities

### Sources:

Above mentioned persons

Questionnaire

J. Janzen, Director, Parks & Recreation Department,  
City of Edmonton

### Summer

An urgent need is expressed by faculty and students alike for quiet places on campus for reading, working and independent study, walking, informal social meeting places, sunbathing, visual enjoyment.

The river valley offers a unique recreational experience for the campus and in addition to the fenced study area, it should provide for a developed trail for walking, horseback riding, and viewing points along the river's edge. This would provide the opportunity for links with the total system of trails and parks along the river that forms part of the Parks & Recreation Master Plan for the City of Edmonton.

### Winter

The need for useful outdoor activities includes skating areas, tobogganing and ski trails (related to the river valley), windbreaks and protected outdoor spaces, and a visual landscape that can be appreciated from indoors and exploits the winter season; for instance, the use of water that becomes frozen to create ice sculpture, plant material to create interest and diversity, snow-scapes, the use of bright colour and supergraphics, etc.





### 3. Outdoor Eating

#### Sources:

Jack Raven - Food & Housing Services

#### Questionnaire

Indoor food services include the major cafeterias: 1,000 places at Lister Hall, 1,300 places in the Student Union Building, 700 in the Central Academic Building, and 900 in the imminent North Garneau food service; serviced lunch-rooms throughout the campus and numerous vending areas.

Future food services proposed in the long range plan will provide a variety of others. They require outdoor areas directly associated with them during the warm weather with space for tables, chairs, and trash cans on maintainable ground surfaces. Informal barbeque and picnic places for eating a bag lunch, or for special events, should be included throughout the campus, with space for informal sitting and trash cans.

### 4. Grounds Furnishings

#### Sources:

Faculty of Arts  
Questionnaire

It is apparent from the nature of the response to the questionnaire that the present signage system and campus directories are inadequate.

Most visitors to the campus find it difficult if not impossible, to find their way around campus. Building signage is unrelated in many cases to the human scale; campus maps while functioning reasonable well, are temporary and should be related to further pedestrian nodes of activity; directional signs, place names, etc. are absent. The intent of the long range landscape plan is to provide clarity and organization to campus movement and activity outdoors, but this must be supplemented by a well designed signage system that is related to pedestrian flows, nodes of activity, parking, entrances, buildings and so on.





In addition, other grounds furnishings, including lighting, benches, waste receptacles, and bus shelters must be incorporated into an overall landscape improvement program and it is recommended that these elements be the subject of further study, to ensure their proper coordination into the total campus environment, following the completion of the long range landscape plan. The Faculty of Fine Arts suggests that lighting should be incorporated into a total open air exhibition and displays. Various advertising agencies would be interested in providing garbage facilities, mini-billboards, benches, and other systems on campus. Alternatives to the problem of grounds furnishings should be explored.

The following is a list of suggestions for the campus grounds improvement program, which is a long-term plan, and the program should be implemented in a phased manner. The primary focus may be on the following:

1. An inventory of grounds on the campus is required, and a plan is needed for the grounds improvement program, which is a long-term plan, and the program should be implemented in a phased manner.
2. A policy that will guide the grounds improvement program is required. For example, the grounds improvement program should be a long-term plan, and the program should be implemented in a phased manner. The program should be a long-term plan, and the program should be implemented in a phased manner.
3. There should be a policy that will guide the grounds improvement program. For example, the grounds improvement program should be a long-term plan, and the program should be implemented in a phased manner. The program should be a long-term plan, and the program should be implemented in a phased manner.
4. A policy is required for the grounds improvement program. For example, the grounds improvement program should be a long-term plan, and the program should be implemented in a phased manner. The program should be a long-term plan, and the program should be implemented in a phased manner.
5. The grounds improvement program should be a long-term plan, and the program should be implemented in a phased manner. The program should be a long-term plan, and the program should be implemented in a phased manner.



## LANDSCAPE MANAGEMENT

Sources of Information: Meetings with:

Mr. J. C. Meier, Physical Plant  
Prof. Hugh Knowles, Department of Plant Science  
Mr. Blake Pratt, Campus Development Office  
Mr. Guy Jutte, Physical Plant  
Mr. Gordon Bulat, Physical Plant

The evolution of long range planning and development for the University raises questions with regard to management policy, and the philosophical base on which the grounds are maintained. The primary issues may be stated as follows:

1. An inventory of resources on the campus is required, and a policy arrived at for predicting landscape development needs in relation to future development.
2. A policy that can determine how landscape elements fit into the total development framework is required. For example, how, when and where should planters, retaining walls, steps, changes of grade, curbs, irrigation systems, etc. be used? What are the parameters for the use, selection and maintenance of lighting, street furniture, types of paving, etc.?
3. There should be a weighting of budget to achieve specific goals, so that the maximum benefit from investment can be realized. There are presently, on campus, many situations where the visual or functional benefits to be derived from various features may not match their cost. (e.g. the concrete planters at the Central Academic Building entrance and at Biological Sciences, the concrete walls around the Physical Education Building parking lot).
4. A policy is required for determining where and when trees should be moved. Questions relating to their relative value to the University, horticultural practices essential to their care, and what practices should be avoided, must be evaluated in establishing such a policy.
5. Existing horticultural elements are important to overall character and planning of the campus. A sound policy related to budgeting and management is, therefore, essential. For instance, there has been a considerable investment in the inventory and root pruning of trees in the North Garneau area. However, consideration of several other factors are important to this program:





- a) What trees are important to the character of the area that could remain, and be integrated with future buildings? b) What trees are best suited for moving to other areas? A blanket moving operation of all trees that are not diseased is not necessarily the best or most economical solution. Greater integration of this kind of management with the building program could affect economics and produce better results.
6. An analysis is necessary of the horticultural practices being carried out in the moving of large trees. For instance, "one shot" root pruning, thawing the ground by burning, an absence of guying and protection of trees from parked cars, storage of materials, and erection of structures, are all factors that will radically reduce the life expectancy of trees on the campus. Since money has been spent on their preservation, a full scale protection program should be established and maintained.
  7. A policy on landscape contracts should be considered in relation to the present landscape industry. From discussions with the Department of Parks & Recreation, City of Edmonton, it would appear that there are very few competent general landscape contractors able to carry out large scale work. It also appears from a study of several contracts that prices are approximately equal to those in Toronto. Study should be made with respect to establishing smaller contracts within a total development, to allow greater competition in bidding, better workmanship and less dependence on the capabilities of one or two general contractors.
  8. Garbage collection and removal requires study with a view to improving this aspect of management. The present situation involves many small containers dotted around the campus that are not only unsightly but inefficient from the point of view of removal. Consideration should be given to centralization of outlets in conjunction with new buildings and centralized service areas. In addition, general clean-up around the campus will require study, in relation to the provision and location of trash baskets. As the campus population grows and more dining and social facilities are provided, the question of garbage collection and clean-up will become more severe.
  9. The development of a staging program will be worked out in some detail in phase II of the landscape plan in conjunction with the establishment of budgets and priorities. In view of the fact that a full scale development program for the outdoor campus has yet to be integrated with the ongoing building program, basic policies with regard to long range and temporary development will require some analysis and clarification.





The principles and recommendations for management may be summarized as follows:

1. Landscape Management is critical to the success of a landscape plan. Policies, and a philosophical base for maintenance operations and budgeting are a part of the plan and should be worked out with the University during the period of its preparation.
2. An inventory of historic and other important site features, and of existing plant materials, should be undertaken as a prerequisite to establishing management goals.
3. A study should be made of non-horticultural maintenance including garbage collection, security, radiation control, fire protection in relation to the long range development plan and the landscape plan.
4. Investment in landscape development and horticultural programs should be geared to providing the maximum value for money spent.
5. Establishment of and adherence to sound planning and horticultural policies are essential if existing trees on campus are to be preserved and remain in a healthy state.
6. For the Plant Nursery to become fully effective, a planting program to determine long term needs should be worked out during the preparation of the Landscape Plan, and integrated with a long range planting and propagation program for the nursery.



## APPENDIX 1

### QUESTIONNAIRE - Folio, January 14, 1971

|                         |     |
|-------------------------|-----|
| Questionnaires received | 258 |
| Questionnaires analyzed | 201 |
| Faculty                 | 131 |
| Non-Academic Staff      | 16  |
| Students                | 54  |

Q1 Is the open space environment of this Campus important to you?

|     |     |     |
|-----|-----|-----|
| No  | 4   | 2%  |
| Yes | 197 | 98% |

Q2 How could it be improved?

|                                                 |    |     |
|-------------------------------------------------|----|-----|
| a) Turn campus into more parking                | 1  |     |
| b) Remove cars from campus                      | 12 | 6%  |
| c) Need for ped./veh. separation                | 3  | 1½% |
| d) Campus should be less crowded with buildings | 6+ | 3%  |
| e) Campus should be more compact                | 1  |     |
| f) Need for a focal point in campus             | 1  |     |
| g) Better facilities for bikeways & parking     | 9  | 4½% |
| h) Trash baskets, benches, tables               | 8  | 4%  |

Q3 Do you use the campus for:

|                                  |    |      |
|----------------------------------|----|------|
| a) Study or teaching             | 58 | 29%  |
| b) Social gatherings             | 49 | 24½% |
| c) Cultural affairs              | 15 | 7½%  |
| d) Organized sport               | 32 | 16%  |
| e) Informal sport and recreation | 85 | 42%  |

Q4 What outdoor activities are desirable but not now possible?

|                                                                                     |    |     |
|-------------------------------------------------------------------------------------|----|-----|
| a) Lunch and outdoor picnic                                                         | 19 | 9½% |
| b) More informal sporting places                                                    | 13 | 6½% |
| c) More tennis courts/volleyball courts                                             | 14 | 7%  |
| d) Winter - skating, tobogganing, ski trails, curling areas.                        | 16 | 8%  |
| e) Bowling Greens                                                                   | 4  | 2%  |
| f) Swimming                                                                         | 4  | 2%  |
| g) Golf                                                                             | 1  |     |
| h) Passive pursuits (i.e. walking, exhibits, concerts, horticulture displays, etc.) | 64 | 32% |





Q5 What provisions could be made for climate?

|                                                  |    |      |
|--------------------------------------------------|----|------|
| a) Enclosed, sheltered walks                     | 87 | 43½% |
| b) Problem of non-slip surfaces, steps, drainage | 28 | 14%  |
| c) Windbreaks and protected spaces               | 32 | 16%  |
| d) No need for covered walks                     | 4  | 2%   |
| e) Protected bus stop shelters                   | 8  | 4%   |
| f) Heated walks, (outside)                       | 5  | 2½%  |
| g) Provision for paraplegics                     | 2  | 1%   |
| g) Summer shade                                  | 2  | 1%   |

Q6 Are parking facilities adequate?

|     |                 |    |      |
|-----|-----------------|----|------|
| Yes | Long term       | 45 | 22½% |
|     | Short term      | 48 | 24%  |
|     | Bike & Scooters | 45 | 22½% |
| No  | Long term       | 11 | 5½%  |
|     | Short term      | 23 | 11½% |
|     | Bike & Scooters | 11 | 5½%  |

Comments:

|                                  |    |     |
|----------------------------------|----|-----|
| More long term                   | 10 | 5%  |
| More visitors & staff short term | 24 | 12% |
| More bikes and scooters          | 7  | 3½% |
| Need for rapid transit           | 6  | 3%  |
| More parking for students        | 8  | 4%  |
| More evening parking             | 1  |     |
| Improve bus service into Campus  | 3  | 1½% |

Q7 Are buildings, parking lots etc., well marked?

|     |     |     |
|-----|-----|-----|
| Yes | 64  | 32% |
| No  | 100 | 50% |

Comments:

|                                                                                            |     |     |
|--------------------------------------------------------------------------------------------|-----|-----|
| Better lighting                                                                            | 4   | 2%  |
| More and better maps, signage on buildings, direction signs, confusing campus for visitors | 100 | 50% |





Q8 Are pedestrian routes adequate and direct?

|     |    |      |
|-----|----|------|
| Yes | 66 | 33%  |
| No  | 69 | 34½% |

Comments:

Walks too narrow for between  
class surges  
Pedestrian vehicular conflicts  
Poor access to outdoors  
Inside corridors crowded  
(and dangerous)

Q9 Which campus have you spent a month or more in? What single factor was most attractive to you?

|                                                            |     |      |
|------------------------------------------------------------|-----|------|
| a) General environment<br>(Architecture, trees, landscape) | 113 | 56½% |
| b) Easy pedestrian movement; lack of cars                  | 11  | 6½%  |
| c) Free parking and good public transit                    | 2   | 1%   |
| d) Interior connections                                    | 3   | 1½%  |
| e) Bikeways                                                | 3   | 1½%  |
| f) Student recreational facilities                         | 3   | 1½%  |
| g) Sports facilities                                       | 1   | 1½%  |

Q10 How much time do you spend on campus?

|                           |     |      |
|---------------------------|-----|------|
| a) 4 - 5 days             | 200 | 100% |
| b) 1 - 3 weekday evenings |     |      |
| Staff - non-academic      | 98  | 49%  |
| Students                  | 38  | 19%  |
| c) 1 - 2 weekend days     |     |      |
| Staff - non-academic      | 77  | 38½% |
| Students                  | 28  | 14%  |
| d) Weekend evenings       |     |      |
| Staff non-academic        | 14  | 7%   |
| Students                  | 6   | 3%   |

Q11 General Comments:

- a) Put campus under a Fuller dome
- b) Greenhouses as a winter refuge
- c) Use of water - especially in winter (ice)
- d) Development of a lake (recreational)
- e) Sidewalk cafes
- f) Use of campus for photography



- g) River ignored as a recreational resource
- h) Consideration of handicapped students
- i) Place for soap box speaking
- j) Sterility of campus, inside and out
- k) Morality problem with planting
- l) Pleasure expressed re questionnaire
- m) Environment, luxury, and waste of money
- n) Don't like D/M plan
- o) Do like D/M plan
- p) Move campus 500 miles south





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